

SR8002/SR7002

RS-232C Control Specification

Category : *AV Reciever*

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1. Introduction

1-1. Purpose

This document was written as a reference specification of products that are controlled by the host controller.

1-2. Scope

This document would be using by software or hardware engineers for production of the product.

1-3. Abbreviations

| Abbreviation | Description |
|--------------|-------------|
| | |
| | |
| | |

1-4. References

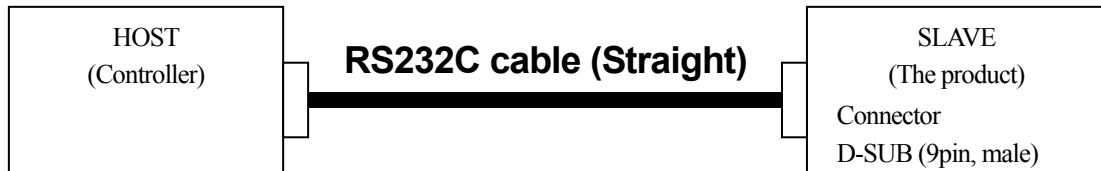
- Hardware Software Interface (HSI) SR8002/SR7002 SW-A0811-HSI-002
Host I/F Command DefinitionHost Controller Interface Specification ver. 0.3 / author: N.Sakamoto

2. Global Description

2-1. Overview

A Host controller can control or watch out the product as a Slave very easily via the communication cable.

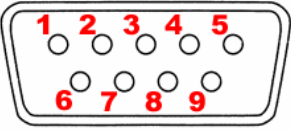
2-2. Block Diagram



* The product connector is using D-SUB 9pin male.

* RS232C cable must use D-SUB 9pin female to connect the products.

2-3. Interface connection specification of the product

| uP Interface | Signal name | Connection device | D-Sub Pin | Connector |
|--------------|--------------|------------------------------|-----------|--|
| - | N.C. | - | 1 | <The product connector> RS232C D-SUB (9pin, Male)  |
| UART | TxD (output) | RS232C Level shift driver | 2 | |
| | RxD (input) | | 3 | |
| - | N.C. | - | 4 | |
| - | GND | GND | 5 | |
| - | N.C. | - | 6 | |
| - | N.C. | - | 7 | |
| - | N.C. | - | 8 | |
| - | N.C. | - | 9 | |

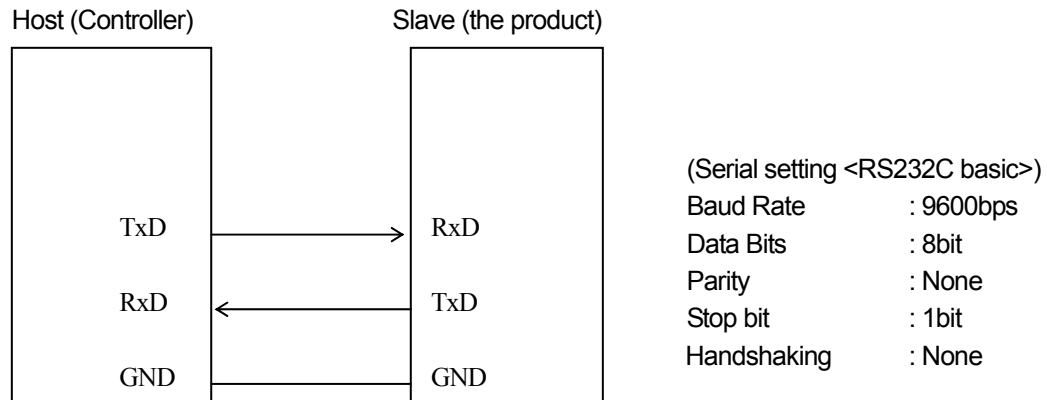
2-4. Assumptions and Dependencies

3. Detailed Description

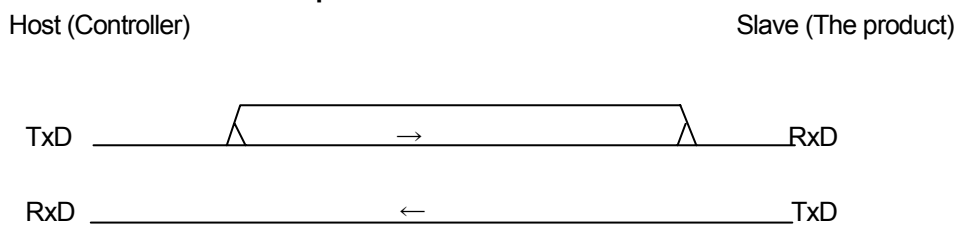
The interface specification between the product and a Host controller is described below.

3-1. Connection format

3-1-1. Physical connection



3-1-1-1. Data transmission sequence from Host to Slave



1. Host starts a data transmission from TxD.
2. Host performs the data transmission of the number of required bytes, and ends a transmission.

3-1-1-2. Data transmission sequence from Slave to Host



1. Slave starts a data transmission from TxD.
2. Slave performs the data transmission of the number of required bytes, and ends a transmission.

3-2. Transmission data format

3-2-1. Transmission data format from Host to Slave

There are two kinds of transmission data form from Host shown below.

3-2-1-1. Form1: Command

Command is a data that requests some status change.

Start character : '@'
 COMMAND : see "Command list"
 End character (CR) : 0Dh

| Start | Command | End |
|-------|--------------|-----|
| @ | "xxx:"+"..." | 0Dh |

3-2-1-2. Form2: Status request

Status request is a data that requests a answer of some status.

Start character : '@'
 Request status : see "Status request list"
 Request character : '?'
 End character (CR) : 0Dh

| Start | Command | End |
|-------|---------------|-----|
| @ | "xxx:?"+"..." | 0Dh |

3-2-2. Transmission data format from Slave to Host

There are two kinds of transmission data form from Slave shown below.

3-2-2-1. Form1: ACK/NAK

ACK is a reply data from Slave when Slave got an acceptable command data from Host.

(ACK is sent to Host when Slave has no related status by the Command.)

Start character : '@', ACK : 06h, End character (CR) : 0Dh

| Start | ACK | End |
|-------|-----|-----|
| @ | 06h | 0Dh |

NAK is a reply data from Slave when Slave got an incorrect Command data, Status request data or some other data from Host.

Start character : '@', NAK : 15h, End character (CR) : 0Dh

| Start | NAK | End |
|-------|-----|-----|
| @ | 15h | 0Dh |

3-2-2-2. Form2: Status answer and Auto status feedback

Status answers are reply data when Slave got an acceptable Request status or Command data from Host. Auto status feedbacks are send to Host data when a Slave's status is changed.

Start character : '@'
 Answer character : see "Status list"
 End character (CR) : 0Dh

| Start | Status | End |
|-------|--------------|-----|
| @ | "xxx:"+"..." | 0Dh |

3-3. The transaction sequences and the regulations

3-3-1. The transaction sequences

The transactions have three kinds of sequence.

- * A transaction is a Command from Host then Slave will be an answer by Status answer, ACK or NAK.
- * A transaction is a Status request from Host then Slave will be an answer by Status answer or NAK.
- * A transaction is Auto status feedback from Slave when a Slave's status changed. (If the auto status feedback is enabled.)

3-3-2. The transaction regulations

The transactions have some kinds of regulation.

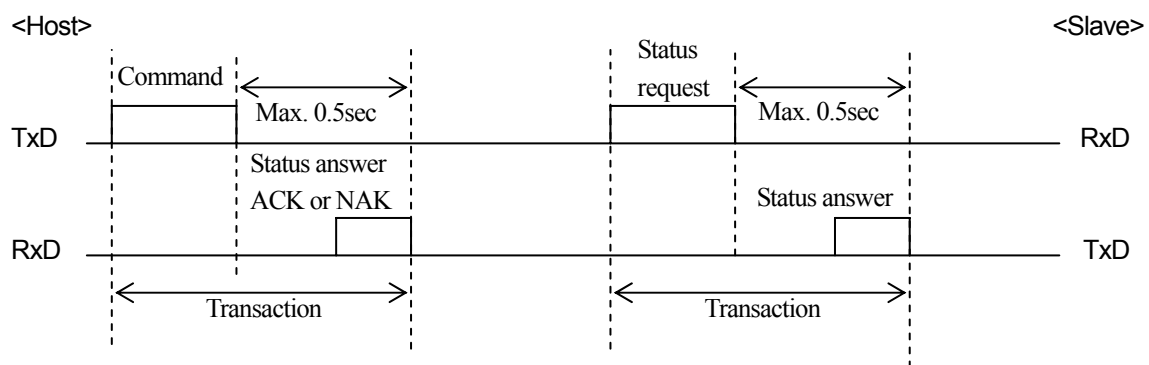
- * An answer (ACK, NAK or Status answer) transmission by Slave has to finish within 500ms when got a Command or a Status request from Host.
- * Host must not transmit an another Command or Status request until "it receives a answer by a previous Command or Status request" or "it passes a term of waiting time from a finishing of previous transmission of a Command or a Status request".
- * Slave has to finish a transaction under 500ms when it sends Auto status feedback data.

3-3-3. Specification of Auto status feedback

There are some specific regulations about Auto status feedback.

- * The product status has segmented into **four layers of 1, 2, 3 and 4**.
- * The status of layer 1 are assigned most kindly status to Host. (The statuses of layer 2 are assigned kindly status, the statuses of layer 3 are not so need status to Host and the statuses of layer 4 are probably no wished statuses.)
- * Each layer status can control transmit enable or disable by Host command. (The product default would be all disables.)
- * Slave sends auto status feedback by itself when the status is changed and if the status feedback is enabled.
- * The product defined and segmentation layers are taking in status list.

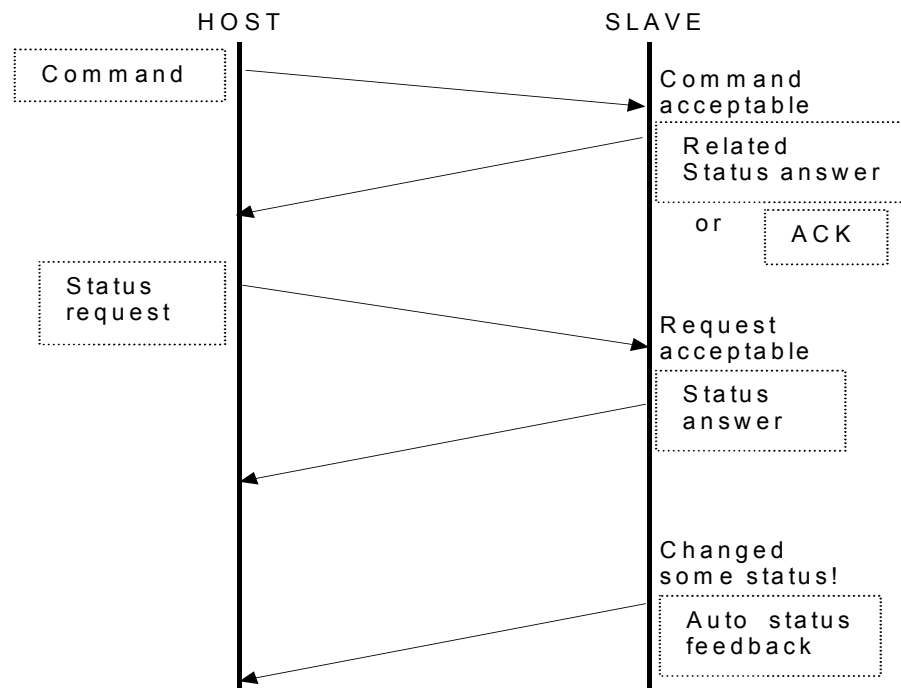
3-3-4. Example of the transactions



Example of the transactions

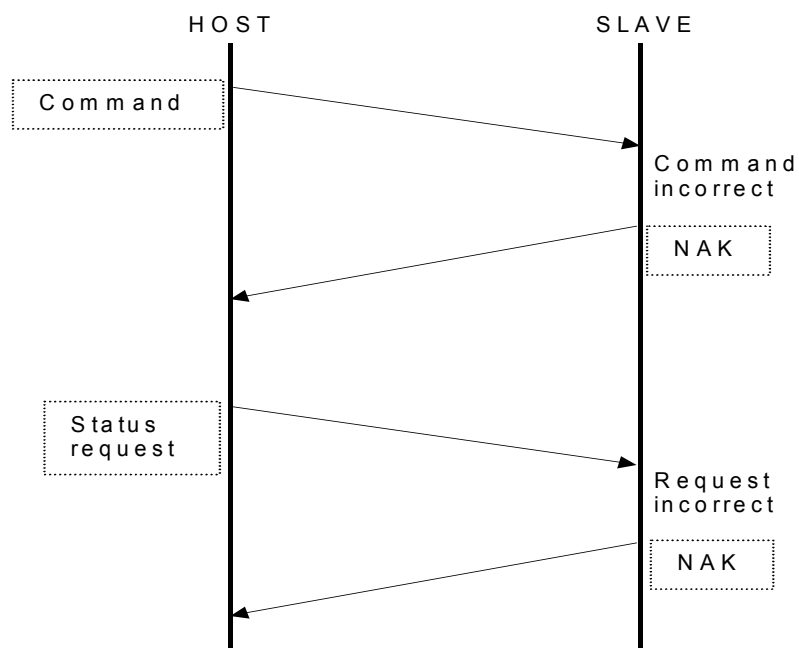
3-3-5. Examples of the handshaking flowchart

3-3-5-1. Example of successful handshaking



The product can reply ACK instead of related status, if the product can not send the related status immediatly.

3-3-5-2. Examples of handshaking error



4. Recommendations of Command, Status and Layer definition

- All Commands, Statuses and Layers will be defined other specific document.
- **[MANDATORY]** The product **MUST** have Commands and the Statuses same as a remote controller buttons (IR controller) of the product.
- All Commands are required working by discrete as ON/OFF commands. (It means that do not support TOGGLE command only.)
- All Commands and Statuses are defined same character size except ACK/NAK on the product. (Recommended character length : 3~6 characters)
- It permits attaching 0x0A character to a reply characters from the product. In this case, must suppose that the object is followed altogether.
- Recommend to supports numbers or values direct setting command, if it has variable numbers or values.

5. Definitions of Command, Status and Layer

This section is told how to define "Command", "Status" and "Layer" of this product.

5-1. Commands

This chapter will show the commands of this product.

5-1-1. Normal Command list

| Command | | | Reply from Slave |
|---------------|------------------|------------|---|
| POWER | TOGGLE | "PWR:0" | "PWR:1", "PWR:2" |
| | OFF | "PWR:1" | |
| | ON | "PWR:2" | |
| | Global Power Off | "PWR:3" | |
| AUDIO ATT | TOGGLE | "ATT:0" | "ATT:0", (None) "ATT:1", (OFF) "ATT:2" (ON) |
| | OFF | "ATT:1" | |
| | ON | "ATT:2" | |
| AUDIO MUTE | TOGGLE | "AMT:0" | "AMT:1", "AMT:2" |
| | OFF | "AMT:1" | |
| | ON | "AMT:2" | |
| VIDEO MUTE | TOGGLE | "VMT:0" | "VMT:1", "VMT:2" |
| | OFF | "VMT:1" | |
| | ON | "VMT:2" | |
| VOLUME | VALUE | "VOL:0xxx" | "VOL:xxx" xxx = vol. value as +18~-80db, y = .0 or .5 db 00.0 = "VOL: 000", -∞ = "VOL:-ZZZ" |
| | UP | "VOL:1" | |
| | DOWN | "VOL:2" | |
| | UP-FAST | "VOL:3" | |
| | DOWN-FAST | "VOL:4" | |
| TONE BASS | VALUE | "TOB:0xxx" | "TOB:xxx" xxx = vol. value as +06 ~-06 |
| | UP | "TOB:1" | |
| | DOWN | "TOB:2" | |
| TONE TREBLE | VALUE | "TOT:0xxx" | "TOT:xxx" xxx = vol. value as +06 ~-06 |
| | UP | "TOT:1" | |
| | DOWN | "TOT:2" | |
| SOURCE Select | TV | "SRC:1" | "SRC:va", (v,a= '0' ~ 'Z') (v = video, a = audio.) v = 0 (V-OFF) a = N (7.1CH) |
| | DVD | "SRC:2" | |
| | VCR1 | "SRC:3" | |
| | DSS/VCR2 | "SRC:5" | |
| | AUX1 | "SRC:9" | |

| Command | | | Reply from Slave |
|----------------------|--------------|---|---|
| | AUX2 | "SRC:A" | |
| | CD/CD-R | "SRC:C" | |
| | TAPE | "SRC:E" | |
| | TUNER1 | "SRC:F" | |
| | FM1 | "SRC:G" | |
| | AM1 | "SRC:H" | |
| | XM1 | "SRC:J" | |
| 7.1 Channel Input | TOGGLE | "71C:0" | "71C:1", (OFF) "71C:2" (ON) |
| | OFF | "71C:1" | |
| | ON | "71C:2" | |
| SPEAKER Select | SPKR SEL | "SPK:0" | "SPK:ab", a=SPK-A,b=SPK-B "SPK:11"(A-OFF,B-OFF), "SPK:21"(A-ON,B-OFF), "SPK:12"(A-OFF,B-ON), "SPK:22"(A-ON,B-ON), |
| | SPKR-A OFF | "SPK:1" | |
| | SPKR-A ON | "SPK:2" | |
| | SPKR-B OFF | "SPK:3" | |
| | SPKR-B ON | "SPK:4" | |
| HDMI OUT CH Select | TOGGLE | "HDM:0" | "HDM:1"(CH1), "HDM:2"(CH2) |
| | HDMI OUT CH1 | "HDM:1" | |
| | HDMI OUT CH2 | "HDM:2" | |
| HDMI AUDIO MODE | ENABLE | "HAM:1" | "HAM:1"(ENABLE), "HAM:2"(THROUGH) |
| | THROUGH | "HAM:2" | |
| IP CONVERTER | DISABLE | "IPC:1" | "IPC:1"(DISABLE), "IPC:2"(ENABLE) |
| | ENABLE | "IPC:2" | |
| COMPONENT2 SELECT | MAIN | "CM2:1" <u>This command is available for SR8002 only.</u> | "CM2:1"(MAIN), "CM2:2"(MULTI) |
| | MULTI | "CM2:2" <u>This command is available for SR8002 only.</u> | |
| SLEEP | VALUE | "SLP:0xxx" (xx="000"~"120") | "SLP:010~120" (ON), "SLP:000" (OFF) |
| | OFF | "SLP:1" | |
| MENU | TOGGLE | "MNU:0" (work same as RC) | "MNU:1", (Not on Menu) "MNU:2" (On Menu) |
| | OFF | "MNU:1" | |
| | ON | "MNU:2" | |
| | ENTER | "MNU:3" | |
| CURSOR | UP | "CUR:1" | ACK |
| | DOWN | "CUR:2" | |
| | LEFT | "CUR:3" | |
| | RIGHT | "CUR:4" | |
| DC TRG. | TRG. 1 OFF | "DCT:11" (DC TRG. 1 OFF) | "DCT:ab" (a,b, = 1:OFF, 2:ON), a = TRG.1, b = TRG.2, eg.) "DCT:11" (all OFF), "DCT:21" (TRG.1 ON), "DCT:12" (TRG.2 ON) "DCT:22" (all ON) |
| | TRG. 1 ON | "DCT:12" (DC TRG. 1 ON) | |
| | TRG. 2 OFF | "DCT:21" (DC TRG.2 OFF) | |
| | TRG. 2 ON | "DCT:22" (DC TRG.2 ON) | |
| FRONT KEY LOCK | OFF | "FKL:1" | "FKL:1" (OFF), FKL:2" (ON) |
| | ON | "FKL:2" | |

| Command | | Reply from Slave |
|------------|-------------------------|-----------------------|
| Surr. Mode | AUTO | "SUR:00" |
| | STEREO | "SUR:01" |
| | DOLBY | "SUR:02" |
| | PL II (x) MOVIE | "SUR:03" |
| | - | |
| | PL II (x) MUSIC | "SUR:05" |
| | - | |
| | PL II (x) GAME | "SUR:07" |
| | - | |
| | - | - |
| | EX/ES | "SUR:0A" |
| | NEURAL | "SUR:0D" |
| | DTS ES(DISC,MATRIX) | "SUR:0E" |
| | NEO6 CINEMA | "SUR:0F" |
| | NEO6 MUSIC | "SUR:0G" |
| | Multi Ch. (MOVIE,MUSIC) | "SUR:0H" |
| | CS II CINEMA | "SUR:0I" |
| | CS II MUSIC | "SUR:0J" |
| | CS II MONO | "SUR:0K" |
| | VIRTUAL | "SUR:0L" |
| | DTS | "SUR:0M" |
| | - | "SUR:0N" |
| | DD+ PL II x MOVIE | "SUR:0O" |
| | DD+ PL II x MUSIC | "SUR:0P" |
| | - | "SUR:0S" |
| | SOURCE DIRECT | "SUR:0T" |
| | PURE DIRECT | "SUR:0U" |
| | NEXT | "SUR:1" |
| | PREV | "SUR:2" |
| | | see Surr. Mode Status |

| Command | | | Reply from Slave | |
|---------|--------------------|---------|----------------------|---------|
| THX | THX TOGGLE | "THX:0" | THX AUTO | "THX:0" |
| | THX OFF | "THX:1" | | |
| | THX ON | "THX:2" | PL II x MOVIE+THX | "THX:3" |
| | THX SURR EX | "THX:3" | PL II MOVIE+THX | "THX:4" |
| | THX CINEMA | "THX:5" | THX SURR EX | "THX:C" |
| | THX GAMES | "THX:6" | DTS ES+THX | "THX:E" |
| | THX MUSIC | "THX:7" | NEO6 CINEMA+THX | "THX:F" |
| | THX SELECT2 CINEMA | "THX:8" | | |
| | DTS NEO6 THX | "THX:9" | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | THX MUSIC | "THX:b" |
| | | | THX GAMES | "THX:c" |
| | | | THX CINEMA | "THX:e" |
| | | | THX SELECT2 CINEMA | "THX:f" |
| | | | DTS NEO6 THX | "THX:g" |
| | | | "SUR:x"(x = '0'~'Z') | |

| Command | | | Reply from Slave | |
|---------|-----------|---------|----------------------------|---------|
| EQ MODE | EQ OFF | "EQM:0" | EQ OFF | "EQM:0" |
| | EQ MODE 1 | "EQM:1" | Set EQ Mode Preset1 | "EQM:1" |
| | EQ MODE 3 | "EQM:3" | Set EQ Mode Front Curve | "EQM:3" |
| | EQ MODE 4 | "EQM:4" | Set EQ Mode Flat Curve | "EQM:4" |
| | EQ MODE 5 | "EQM:5" | Set EQ Mode Audyssey Curve | "EQM:5" |
| | | | | |

| Command | | | Reply from Slave |
|----------------------|---------|------------------------|-------------------------------------|
| Dolby Headphone Mode | BYPASS | "DHM:0" | "DHM:x" x = Dolby Headphone mode |
| | DH1(DH) | "DHM:1" | |
| | | "DHM:2" (+PL II MOVIE) | |
| | | "DHM:3" (+PL II MUSIC) | |

| Command | | | Reply from Slave |
|--|--------|-----------------------------|--|
| NIGHT MODE | TOGGLE | "NGT:0" | "NGT:0", (invalid) "NGT:1", (OFF) "NGT:2" (ON) "NGT:3(AUTO)" |
| | OFF | "NGT:1" | |
| | ON | "NGT:2" | |
| | AUTO | "NGT:3" | |
| M-DAX | OFF | "MDA:1" | "MDA:1", (OFF) "MDA:2", (LOW) "MDA:3" (HIGH) |
| | LOW | "MDA:2" | |
| | HIGH | "MDA:3" | |
| Lip Sync. | VALUE | "LIP:0xxx" (xxx = value ms) | "LIP:xxx", (xxx = value ms) xxx = "000" (OFF) xxx = "010" ~ "200" (ON) |
| | UP | "LIP:1" (up 10ms) | |
| | DOWN | "LIP:2" (down 10ms) | |
| Test Tone (Force start/stop Test Tone with Auto mode) | TOGGLE | "TTO:0" | "TTO:1xy" (OFF), "TTO:2xy" (ON) (x= auto(0)/manual(1), y= ch.) |
| | OFF | "TTO:1" | |
| | ON | "TTO:2" | |
| | NEXT | "TTO:3" | |
| | PREV | "TTO:4" | |

For Analog Tuner Model

| Command | | | Reply from Slave |
|--------------------|---------------------------------|--|---|
| Tuner1 Frequency | VALUE | "TFQ:0xxxxx" (xxxxx = freq.) | "TFQ:xxxxx" (xxxxx = Frequency) if (xxxxx < 00256) band = XM; else if (xxxxx < 02000) band=AM; else band=FM; (ex."08750" = FM87.50MHz) *Auto-UP/DOWN dose not operate in XM *XM can be selected When Band is XM. |
| | UP | "TFQ:1" | |
| | DOWN | "TFQ:2" | |
| | Auto-UP | "TFQ:3" | |
| | Auto-DOWN | "TFQ:4" | |
| | HD Auto-UP (HD Radio Only) | "TFQ:5" <u>This command is available for SR8002 only.</u> | |
| | HD Auto-DOWN (HD Radio Only) | "TFQ:6" <u>This command is available for SR8002 only.</u> | |
| Tuner1 Preset | VALUE | "TPR:0ww" | "TPR:ww" (ww = current preset nr.) (ww = 01 ~ ??) |
| | UP | "TPR:1" | |
| | DOWN | "TPR:2" | |
| | P-Scan start | "TPR:3" | |
| | P-Scan stop | "TPR:4" | |
| Tuner1 mode | TOGGLE | "TMD:0" | "TMD:0" (-), "TMD:1" (MONO), "TMD:2" (AUTO) "TMD:3" (Dig AUTO) |
| | OFF(MONO) | "TMD:1" | |
| | ON(AUTO) | "TMD:2" | |
| | Digital Auto (HD Radio Only) | "TMD:3" <u>This command is available for SR8002 only.</u> | |
| Tuner Preset Info. | TOGGLE | "TPI:0" | "TPI:1" (OFF), "TPI:2" (ON) |
| | OFF | "TPI:1" | |
| | ON | "TPI:2" | |
| Tuner1 MEMO | - | "MEM:0" | ACK |
| Tuner1 CLEAR | - | "CLR:0" | ACK |

| Command | | | Reply from Slave |
|---------------------------------|-----------|---------|---|
| XM Category (Main Room Only) | TOGGLE | "CAT:0" | "CAT:yyy" y= 1(un search), 2(in search) xx= Category No. 00(none), 01 to 32 |
| | CH. UP | "CAT:1" | |
| | CH. DOWN | "CAT:2" | |
| | CAT. NEXT | "CAT:3" | |
| | CAT. PREV | "CAT:4" | |

| Command | | | Reply from Slave |
|-------------------------------|----------|--------------------------|--|
| Multi Room A POWER | TOGGLE | "MPW:0" | "MPW:1", (OFF) "MPW:2" (ON) |
| | OFF | "MPW:1" | |
| | ON | "MPW:2" | |
| Multi Room A SPEAKER | TOGGLE | "MSP:0" | "MSP:1", (OFF) "MSP:2" (ON) |
| | OFF | "MSP:1" | |
| | ON | "MSP:2" | |
| Multi Room A AUDIO MUTE | TOGGLE | "MAM:0" | "MAM:1", "MAM:2" |
| | OFF | "MAM:1" | |
| | ON | "MAM:2" | |
| Multi Room A VOLUME | VALUE | "MVL:0xxx" | "MVL:xxx" xxx = vol. value as "00" ~"-90" |
| | UP | "MVL:1" | |
| | DOWN | "MVL:2" | |
| Multi Room A VOLUME SET | VARIABLE | "MVS:1" | "MVS:1", (VARIABLE) "MVS:2" (FIXED) |
| | FIXED | "MVS:2" | |
| Multi Room A SOURCE Select | TV | "MSC:1" | "MSC:va", (v ,a= '0' – 'Z') (v = video, a = audio.) |
| | DVD | "MSC:2" | |
| | VCR1 | "MSC:3" | |
| | DSS/VCR2 | "MSC:5" | |
| | AUX1 | "MSC:9" | |
| | AUX2 | "MSC:A" | |
| | CD/CDR | "MSC:C" | |
| | TAPE | "MSC:E" | |
| | TUNER1 | "MSC:F" | |
| | FM1 | "MSC:G" | |
| | AM1 | "MSC:H" | |
| | XM1 | "MSC:J" | |
| Multi Room A SLEEP | VALUE | "MSL:0xxx" ("xxx" = min) | "MSL:xx" (xx = min) "MSL:000" |
| | OFF | "MSL:1" | |
| Multi Room A Stereo/Mono | TOGGLE | "MST:0" | "MST:0"(-), "MST:1"(STEREO), "MST:2"(MONO) |
| | STEREO | "MST:1" | |
| | MONO | "MST:2" | |

| Command | | | Reply from Slave |
|-----------------------------------|----------|------------|---|
| Multi RoomA Speaker VOLUME | VALUE | "MSV:0xxx" | "MSV:xxx" xxx = vol. value as +90 ~-90 |
| | UP | "MSV:1" | |
| | DOWN | "MSV:2" | |
| Multi RoomA Speaker VOLUME SET | VARIABLE | "MSS:1" | "MSS:1", "MSS:2" |
| | FIXED | "MSS:2" | |
| Multi RoomA Speaker AUDIO MUTE | TOGGLE | "MSM:0" | "MSM:1", "MSM:2" |
| | OFF | "MSM:1" | |
| | ON | "MSM:2" | |

For Analog Tuner Model

| Command | | | Reply from Slave |
|----------------------------------|---------------------------------|---|---|
| Multi Room A Tuner1 Frequency | VALUE | "MTF:0xxxxx" (xxxxx = freq.) | "MTF:xxxxx" (xxxxx = Frequency) if (xxxxxx < 00256) band = XM; else if (xxxxx < 02000) band=AM; else band=FM; (ex."08750" = FM87.50MHz) *Auto-UP/DOWN dose not operate in XM *XM can be selected When Band is XM. |
| | UP | "MTF:1" | |
| | DOWN | "MTF:2" | |
| | Auto-UP | "MTF:3" | |
| | Auto-DOWN | "MTF:4" | |
| | HD Auto-UP (HD Radio Only) | "MTF:5" <u>This command is available for SR8002 only.</u> | |
| | HD Auto-DOWN (HD Radio Only) | "MTF:6" <u>This command is available for SR8002 only.</u> | |
| Multi Room A Tuner1 Preset | VALUE | "MTP:0ww" (ww = preset nr.) | "MTP:ww" (ww = current preset nr.) (ww = 01 ~??) |
| | UP | "MTP:1" | |
| | DOWN | "MTP:2" | |
| | SCAN Start | "MTP:3" | |
| | SCAN Stop | "MTP:4" | |
| Multi Room A Tuner1 mode | TOGGLE | "MTM:0" | "MTM:0"(-), "MTM:1"(MONO), "MTM:2"(AUTO) "MTM:3"(DigAUTO) |
| | OFF(MONO) | "MTM:1" | |
| | ON(AUTO) | "MTM:2" | |
| | Digital Auto (HD Radio Only) | "MTM:3" <u>This command is available for SR8002 only.</u> | |

This part is available for SR8002 only.

| Command | | | Reply from Slave |
|-------------------------------|----------|--------------------------|---|
| Multi Room B POWER | TOGGLE | "MPW=0" | "MPW=1", (OFF) "MPW=2" (ON) |
| | OFF | "MPW=1" | |
| | ON | "MPW=2" | |
| Multi Room B SPEAKER | TOGGLE | "MSP=0" | "MSP=1", (OFF) "MSP=2" (ON) |
| | OFF | "MSP=1" | |
| | ON | "MSP=2" | |
| Multi Room B AUDIO MUTE | TOGGLE | "MAM=0" | "MAM=1", "MAM=2" |
| | OFF | "MAM=1" | |
| | ON | "MAM=2" | |
| Multi Room B VOLUME | VALUE | "MVL=0xxx" | "MVL=xxx" xxx = vol. value as "00" ~"-90" |
| | UP | "MVL=1" | |
| | DOWN | "MVL=2" | |
| Multi Room B VOLUME SET | VARIABLE | "MVS=1" | "MVS=1", (VARIABLE) "MVS=2" (FIXED) |
| | FIXED | "MVS=2" | |
| Multi Room B SOURCE Select | TV | "MSC=1" | "MSC=va", (v ,a= '0' - 'Z') (v = video, a = audio.) *Video is always '0'. |
| | DVD | "MSC=2" | |
| | VCR1 | "MSC=3" | |
| | DSS/VCR2 | "MSC=5" | |
| | AUX1 | "MSC=9" | |
| | AUX2 | "MSC=A" | |
| | CD/CD-R | "MSC=C" | |
| | TAPE | "MSC=E" | |
| | TUNER1 | "MSC=F" | |
| | FM1 | "MSC=G" | |
| | AM1 | "MSC=H" | |
| | XM1 | "MSC=J" | |
| Multi Room B SLEEP | VALUE | "MSL=0xxx" ("xxx" = min) | "MSL=xxx" (xxx = min) |
| | OFF | "MSL=1" | "MSL=000" |
| Multi Room B Stereo/Mono | TOGGLE | "MST=0" | "MST=0"(-), "MST=1"(STEREO), "MST=2"(MONO) |
| | STEREO | "MST=1" | |
| | MONO | "MST=2" | |

This part is available for SR8002 only.

| Command | | | Reply from Slave |
|-----------------------------------|----------|------------|---|
| Multi RoomB Speaker VOLUME | VALUE | "MSV=0xxx" | "MSV=xxx" xxx = vol. Value as +90 ~-90 |
| | UP | "MSV=1" | |
| | DOWN | "MSV=2" | |
| Multi RoomB Speaker VOLUME SET | VARIABLE | "MSS=1" | "MSS=1", "MSS=2" |
| | FIXED | "MSS=2" | |
| Multi RoomB Speaker AUDIO MUTE | TOGGLE | "MSM=0" | "MSM=1", "MSM=2" |
| | OFF | "MSM=1" | |
| | ON | "MSM=2" | |

This part is available for SR8002 only.

For Analog Tuner Model

| Command | | | Reply from Slave |
|----------------------------------|---------------------------------|--------------------------------|---|
| Multi Room B Tuner1 Frequency | VALUE | "MTF=0xxxxx" (xxxxx = freq.) | "MTF=xxxxx" (xxxxx = Frequency) if (xxxxx < 00256) band = XM; else if (xxxxx < 02000) band=AM; else band=FM; (ex."08750" = FM87.50MHz) *Auto-UP/DOWN dose not operate in XM *XM can be selected When Band is XM. |
| | UP | "MTF=1" | |
| | DOWN | "MTF=2" | |
| | Auto-UP | "MTF=3" | |
| | Auto-DOWN | "MTF=4" | |
| | HD Auto-UP (HD Radio Only) | "MTF=5" | |
| | HD Auto-DOWN (HD Radio Only) | "MTF=6" | |
| Multi Room B Tuner1 Preset | VALUE | "MTP=0ww" (ww = preset nr.) | "MTP=ww" (ww = current preset nr.) (ww = 01 ~??) |
| | UP | "MTP=1" | |
| | DOWN | "MTP=2" | |
| | SCAN Start | "MTP=3" | |
| | SCAN Stop | "MTP=4" | |
| Multi Room B Tuner1 mode | TOGGLE | "MTM=0" | "MTM=0" (-), "MTM=1"(MONO), "MTM=2"(AUTO) "MTM=3"(DigAUTO) |
| | OFF(MONO) | "MTM=1" | |
| | ON(AUTO) | "MTM=2" | |
| | Digital Auto (HD Radio Only) | "MTM=3" | |

5-1-2. Specific Commands

| Command from Host | | Reply from Slave |
|--|--|---------------------------|
| Auto status feedback | "AST:x" (x = '0' ~ 'F') | same as command define |
| (The product default is disabled all auto status feedback.) | bit 3 : Layer 4 (1 = Enable, 0 = Disable) bit 2 : Layer 3 (1 = Enable, 0 = Disable) bit 1 : Layer 2 (1 = Enable, 0 = Disable) bit 0 : Layer 1 (1 = Enable, 0 = Disable) | |

5-2. Status request and Status answer list

5-2-1. Normal Status request and Status (answer and feedback) list

| Status request | | Status answer and feedback | |
|---|---------|---|--|
| POWER | "PWR:?" | OFF | "PWR:1" |
| | | ON | "PWR:2" |
| AUDIO ATT | "ATT:?" | OFF | "ATT:1" |
| | | ON | "ATT:2" |
| AUDIO MUTE | "AMT:?" | OFF | "AMT:1" |
| | | ON | "AMT:2" |
| VIDEO MUTE | "VMT:?" | OFF | "VMT:1" |
| | | ON | "VMT:2" |
| VOLUME | "VOL:?" | Volume value = xxxy (see command list) | "VOL:xxxxy" (+18.0 ~ -80.0dB) |
| TONE BASS | "TOB:?" | Bass value = xxx (see command list) | "TOB:xxx" |
| TONE TREBLE | "TOT:?" | Treble value = xxx (see Command List) | "TOT:xxx" |
| SOURCE Select | "SRC:?" | Video+Audio source (see Command List) | "SRC:va" (v ,a= '0' ~ 'Z') (v = video, a = audio.) |
| 7.1 Channel Input | "71C:?" | OFF | "71C:1" |
| | | ON | "71C:2" |
| INPUT (A/D) SELECT | "INP:?" | ANALOG | "INP:1" |
| | | DIGITAL | "INP:2" |
| | | HDMI | "INP:4" |
| | | AUTO[DIGITAL] | "INP:6" |
| | | AUTO [HDMI] | "INP:8" |
| INPUT SIGNAL | "ISG:?" | ANALOG | "ISG:1" |
| | | DIGITAL | "ISG:2" |
| | | HDMI | "ISG:4" |
| SPEAKER Select | "SPK:?" | Speaker status = ab a = SPKR-A, b = SPKR-B | "SPK:ab" a,b (1 = OFF, 2 = ON) |
| HDMI OUT CHANNEL | "HDM:?" | HDMI OUT CH1 | "HDM:1" |
| | | HDMI OUT CH2 | "HDM:2" |
| HDMI AUDIO MODE | "HAM:?" | HDMI ENABLE | "HAM:1" |
| | | HDMI THROUGH | "HAM:2" |
| Source Input State | "IST:?" | UNKNOWN | "IST:0" |
| | | OFF | "IST:1" |
| | | ON | "IST:2" |
| AUTO LIP SYNC | "HAL:?" | AUTO LIP SYNC DISABLE | "ALS:1" |
| | | AUTO LIP SYNC ENABLE | "ALS:2" |
| IP CONVERTER | "IPC:?" | I/P CONVERT DISABLE | "IPC:1" |
| | | I/P CONVERT ENABLE | "IPC:2" |
| COMPONENT2 SELECT | "CM2:?" | COMP2 MAIN ROOM | "CM2:1" |
| <u>This command is available for SR8002 only.</u> | | COMP2 MULTI ROOM | "CM2:2" |

| Status request | | Status answer and feedback | |
|----------------|---------|------------------------------------|-----------------------|
| SLEEP | "SLP:?" | Sleep time (xx = 000 ~ 120) | "SLP:xxx" |
| MENU | "MNU:?" | OFF | "MNU:1" (Not on Menu) |
| | | ON | "MNU:2" (On Menu) |

| Status request | | Status answer and feedback | |
|----------------|---------|---|--|
| DC TRG. | "DCT:?" | "DCT:abcd" (1 = OFF, 2 = ON) (a = TRG.1, b = TRG.2 | eg.) "DCT:11", (all OFF) "DCT:12", (TRG.2 ON) "DCT:22" (all ON) |
| FLONT KEY LOCK | "FKL:?" | OFF | "FKL:1" |
| | | ON | "FKL:2" |

| Status request | | Status answer and feedback | |
|----------------|--------------------|------------------------------|----------------|
| Surr. Mode | "SUR:?" "THX:?" | AUTO | "SUR:0" |
| | | STEREO | "SUR:1" |
| | | DOLBY | "SUR:2" |
| | | PL II xMOVIE | "SUR:3" |
| | | PL II MOVIE | "SUR:4" |
| | | PL II xMUSIC | "SUR:5" |
| | | PL II MUSIC | "SUR:6" |
| | | PL II xGAME | "SUR:7" |
| | | PL II GAME | "SUR:8" |
| | | MULTI-CH | "SUR:9" |
| | | EX/ES | "SUR:A" |
| | | - | "SUR:B" |
| | | DD EX | "SUR:C" |
| | | NEURAL | "SUR:D" |
| | | DTS ES(DISC,MATRIX) | "SUR:E" |
| | | NEO6 CINEMA | "SUR:F" |
| | | NEO6 MUSIC | "SUR:G" |
| | | Multi Ch. (MOVIE,MUSIC) | "SUR:H" |
| | | CS II CINEMA | "SUR:I" |
| | | CS II MUSIC | "SUR:J" |
| | | CS II MONO | "SUR:K" |
| | | VIRTUAL | "SUR:L" |
| | | DTS | "SUR:M" |
| | | DTS NEO6 | "SUR:N" |
| | | DD+PL2xMOVIE | "SUR:O" |
| | | DD+PL2xMUSIC | "SUR:P" |
| | | AAC+PL2xMOVIE | "SUR:Q" |
| | | AAC+PL2xMUSIC | "SUR:R" |
| | | AAC | "SUR:S" |
| | | SOURCE DIRECT | "SUR:T" |
| | | PURE DIRECT | "SUR:U" |
| | | SACD | "SUR:V" |
| | | - | "SUR:W" |
| | | Head Phone | "SUR:X" |
| | | DOLBY DIGITAL PLUS | "SUR:a" |
| | | DOLBY DIGITAL PLUS EX | "SUR:b" |
| | | DOLBY TRUE HD | "SUR:c" |
| | | DOLBY TRUE HD EX | "SUR:d" |
| | | DTS HD MSTR | "SUR:e" |
| | | DTS HD HI RES | "SUR:f" |
| | | DTS HD EXPRESS | "SUR:g" |

| Status request | | Status answer and feedback | |
|----------------|--------------------|----------------------------|---------|
| THX Mode | "THX:?" "SUR:?" | THX AUTO | "THX:0" |
| | | - | "THX:1" |
| | | - | "THX:2" |
| | | PL2xVOMIE +THX | "THX:3" |
| | | PL2 MOVIE+THX | "THX:4" |
| | | THX SURR EX | "THX:C" |
| | | DTS ES+THX | "THX:E" |
| | | NEO6 CINEMA+THX | "THX:F" |
| | | THX MUSIC | "THX:b" |
| | | THX GAMES | "THX:c" |
| | | THX CINEMA | "THX:e" |
| | | THX SELECT2 CINEMA | "THX:f" |
| | | DTS NEO6 THX | "THX:g" |

| Status request | | Status answer and feedback | |
|----------------|---------|----------------------------|---------|
| EQ MODE | "EQM:?" | EQ OFF | "EQM:0" |
| | | Set EQ Mode Preset1 | "EQM:1" |
| | | Set EQ Mode Front Curve | "EQM:3" |
| | | Set EQ Mode Flat Curve | "EQM:4" |
| | | Set EQ Mode Audyssey Curve | "EQM:5" |

| Status request | | Status answer and feedback | |
|----------------------|---------|------------------------------------|---|
| Surr. Mode | "SUR:?" | "SUR:x", "THX:x" | same as command replay (see Command list) |
| THX | "THX:?" | "SUR:x", "THX:x" | same as command reply (see Command list) |
| Dolby Headphone mode | "DHM:?" | "DHM:x" | same as command reply (see Command list) |
| Night Mode | "NGT:?" | OFF | "NGT:1" |
| | | ON | "NGT:2" |
| | | AUTO | "NGT:2" |
| M-DAX | "MDA:?" | OFF | "MDA:1", |
| | | LOW | "MDA:2", |
| | | HIGH | "MDA:3" |
| Lip Sync. | "LIP:?" | VALUE (ms) | "LIP:xxx" (xxx = 000 ~ 200 ms) |
| Test Tone | "TTO:?" | OFF | "TTO:1xy" |
| | | ON (x=auto(0)/manual(1), y=ch) | "TTO:2xy" |

| Status request | | Status answer and feedback | |
|-----------------------|---------|---|--------------------------|
| Digital Signal Format | "SIG:?" | x = '0' : No detect '1' : D DIGITAL AC-3 '2' : D DIGITAL AC-3 PL '3' : D DIGITAL SURR. EX '4' : DTS '5' : DTS ES DISCRETE '6' : DTS ES MATRIX '7' : AAC '8' : MPEG '9' : M-PCM 'A' : PCM 'B' : HDCD 'C' : DSD 'D' : DTS 96/24 'E' : reserved 'F' : OTHER 'G' : DD PLUS 'H' : DD THROU HD 'I' : DTS HD MSTR 'J' : DTS HD HI RES 'K' : DTS HD EXPRESS | "SIG:x" x = signal |
| Sampling Frequency | "SFQ:?" | x = '0' : Out of range '1' : 32kHz '2' : 44.1kHz '3' : 48kHz '4' : 88.2kHz '5' : 96kHz '6' : 176.4kHz '7' : 192kHz 'F' : Input isn't Digital (=Analog) | "SFQ:x" x = Freq. |
| Channel Status | "CHS:?" | xy = "00": Not available 'x' = '8' ~ 'F' bit3 : 1 bit2 : LFE bit1 : Surr. L bit0 : Surr. R 'y' = '0' ~ 'F' bit3 : Surr Back bit2 : Front L bit1 : Front R bit0 : Center | "CHS:xy" xy = Ch.Stat |

For Analog Tuner Model

| Status request | | Status answer and feedback | |
|--|---------|--|---|
| Tuner1 Frequency | "TFQ:?" | "TFQ:xxxx" | same as command reply (see Command list) |
| Tuner1 Preset | "TPR:?" | "TPR:ww" | same as command reply (see Command list) |
| Tuner1 mode | "TMD:?" | OFF (MONO) | "TMD:1" |
| | | AUTO | "TMD:2" |
| | | Digital Auto (HD Radio Only) <u>This answer is available for SR8002 only.</u> | "TMD:3" |
| Tuner1 Preset Info. | "TPI:?" | OFF | "TPI:1" |
| | | ON | "TPI:2" |
| <u>Tuner1 Multicast (HD Radio Only)</u> <u>This command is available for SR8002 only.</u> | "TMC:?" | "TMC:xx" | "TMC:xx" (xx = 01 ~ 08) |

| Status request | | Status answer and feedback | |
|---------------------------------|---------|----------------------------|---|
| XM Category (Main Room Only) | "CAT:?" | "CAT:yyx" | same as command reply (see Command list) |

| Status request | | Status answer and feedback | |
|----------------|---------|----------------------------|---------------------------|
| XM ChName | "CHN:?" | Channel Name | "CHN:xxxxxxx" *=10Byte |
| XM ArtistName | "ARN:?" | Artist Name | "ARN:xxxxxxx" *=16Byte |
| XM SongTitle | "SON:?" | Song Title | "SON:xxxxxxx" *=16Byte |
| XM CategoyName | "CTN:?" | Category Name | "CTN:xxxxxxx" *=8Byte |

This part is available for SR8002 only.

| Status request | | Status answer and feedback | |
|----------------|---------|---|---------------------------|
| HD StationName | “CHN*?” | Channel(Station) Name | “CHN*xxxxxxx” X=10Byte |
| HD TXT1 | “ARN*?” | Artist Name (RDS Radio Text) | “ARN*xxxxxxx” X=16Byte |
| HD TXT2 | “SON*?” | Song Title (RDS Program Service Name) | “SON*xxxxxxx” X=16Byte |
| HD PTYName | “CTN*?” | Category(PTY) Name | “CTN*xxxxxxx” X=8Byte |

| Status request | | Status answer and feedback | |
|-----------------------------------|----------------|--|----------------|
| Multi Room A POWER | "MPW:?" | OFF | "MPW:1" |
| | | ON | "MPW:2" |
| Multi Room A SPEAKER | "MSP:?" | OFF | "MSP:1" |
| | | ON | "MSP:2" |
| Multi Room A AUDIO MUTE | "MAM:?" | OFF | "MAM:1" |
| | | ON | "MAM:2" |
| Multi Room A VOLUME | "MVL:?" | Volume value = xxx | "MVL:xxx" |
| Multi Room A VOLUME SET | "MVS:?" | VARIABLE | "MVS:1" |
| | | FIXED | "MVS:2" |
| Multi Room A SOURCE Select | "MSC:?" | Video+Audio source (v ,a= '0' – 'Z') (v = video, a = audio.) | "MSC:va" |
| Multi Room A SLEEP | "MSL:?" | Sleep time min : xxx = '000' ~ '120' | "MSL:xxx" |
| Multi Room A OSD | "MOS:?" | OFF | "MOS:1" |
| | | ON | "MOS:2" |
| Multi Room A STEREO/MONO | "MST:?" | STEREO | "MST:1" |
| | | MONO | "MST:2" |
| Multi Room A SPEAKER | "MSP:?" | OFF | "MSP:1" |
| | | ON | "MSP:2" |
| Multi RoomA Speaker VOLUME | "MSV:?" | Volume value = xxx | "MSV:xxx" |
| Multi RoomA Speaker Volume Set | "MSS:?" | VARIABLE | "MSS:1" |
| | | FIXED | "MSS:2" |
| Multi RoomA Speaker AUDIO MUTE | "MSM:?" | OFF | "MSM:1" |
| | | ON | "MSM:2" |

For Analog Tuner Model

| Status request | | Status answer and feedback | |
|---|----------------|--|------------------------------------|
| Multi Room A Tuner1 Frequency | "MTF:?" | xxxxx = frequency if (xxxxx < 00256) band = XM ; else if (xxxxx < 02000) band=AM; else band=FM; | "MTF:xxxxx" |
| Multi Room A Tuner1 Preset | "MTP:?" | xx = preset number (01 ~ ??) | "MTP:xx" |
| Multi Room A Tuner1 Mode | "MTM:?" | - (None) | "MTM:0" |
| | | OFF (MONO) | "MTM:1" |
| | | ON (AUTO) | "MTM:2" |
| | | Digital Auto(HD Radio Only) <u>This answer is available for SR8002 only.</u> | "MTM:3" |
| Multi Room A Tuner1 Multicast (HD Radio Only) <u>This command is available for SR8002 only.</u> | "MMC:?" | ww = multicast number (01 ~ 08) | "MMC:ww" (ww = 01 ~ 08) |

This part is available for SR8002 only.

| Status request | | Status answer and feedback | |
|-----------------------------------|---------|--|-----------|
| Multi Room B POWER | "MPW=?" | OFF | "MPW=1" |
| | | ON | "MPW=2" |
| Multi Room B SPEAKER | "MSP=?" | OFF | "MSP=1" |
| | | ON | "MSP=2" |
| Multi Room B AUDIO MUTE | "MAM=?" | OFF | "MAM=1" |
| | | ON | "MAM=2" |
| Multi Room B VOLUME | "MVL=?" | Volume value = xxx | "MVL=xxx" |
| Multi Room B VOLUME SET | "MVS=?" | VARIABLE | "MVS=1" |
| | | FIXED | "MVS=2" |
| Multi Room B SOURCE Select | "MSC=?" | Video+Audio source (v ,a= '0' – 'Z') (v = video, a = audio.) | "MSC=va" |
| Multi Room B SLEEP | "MSL=?" | Sleep time min : xxx = '000' ~ '120' | "MSL=xxx" |
| Multi Room B OSD | "MOS=?" | OFF | "MOS=1" |
| | | ON | "MOS=2" |
| Multi Room B STEREO/MONO | "MST=?" | STEREO | "MST=1" |
| | | MONO | "MST=2" |
| Multi Room B SPEAKER | "MSP=?" | OFF | "MSP=1" |
| | | ON | "MSP=2" |
| Multi RoomB Speaker VOLUME | "MSV=?" | Volume value = xxx | "MSV=xxx" |
| Multi RoomB Speaker Volume Set | "MSS=?" | VARIABLE | "MSS=1" |
| | | FIXED | "MSS=2" |
| Multi RoomB Speaker AUDIO MUTE | "MSM=?" | OFF | "MSM=1" |
| | | ON | "MSM=2" |

This part is available for SR8002 only.**For Analog Tuner Model**

| Status request | | Status answer and feedback | |
|----------------------------------|---------|--|-------------|
| Multi Room B Tuner1 Frequency | "MTF=?" | xxxxx = frequency if (xxxxxx < 00256) band = XM; else if (xxxxxx < 02000) band=AM; else band=FM; | "MTF=xxxxx" |
| Multi Room B Tuner1 Preset | "MTP=?" | xx = preset number (01 ~ ??) | "MTP=xx" |
| Multi Room B Tuner1 Mode | "MTM=?" | - (None) | "MTM=0" |
| | | OFF (MONO) | "MTM=1" |
| | | ON (AUTO) | "MTM=2" |
| | | Digital Auto (HD Radio Only) | "MTM=3" |
| Multi Room B Tuner1 Multicast | "MMC=?" | xx = multicast number (01 ~ 08) | "MMC=xx" |

5-2-2. Layer of the statuses

| Status | | Layer |
|---------------------------|---------------|----------|
| POWER | "PWR:" | 1 |
| AUDIO ATT | "ATT:" | 3 |
| AUDIO MUTE | "AMT:" | 1 |
| VIDEO MUTE | "VMT:" | 1 |
| VOLUME | "VOL:" | 1 |
| TONE BASS | "TOB:" | 1 |
| TONE TREBLE | "TOT:" | 1 |
| SOURCE Select | "SRC:" | 1 |
| 7.1 Channel Input | "71C:" | 1 |
| INPUT (A/D) SELECT | "INP:" | 3 |
| INPUT SIGNAL SOURCE | "ISG:" | 3 |
| SPEAKER Select | "SPK:" | 1 |
| HDMI OUT CHANNEL SELECT | "HDM:" | 1 |
| HDMI AUDIO MODE | "HAM:" | 1 |
| Source Input State | "IST:" | 1 |
| IP CONVERTER | "IPC:" | 1 |
| COMPONENT2 SELECT | "CM2:" | 1 |

| Status | | Layer |
|----------|--------|-------|
| DISPLAY | "DIP:" | 1 |
| OSD | "OSD:" | 1 |
| SLEEP | "SLP:" | 2 |
| MENU | "MNU:" | 4 |
| DC TRIG. | "DCT:" | 1 |

| Status | | Layer |
|-----------------------|---------------|----------|
| Surr. Mode | "SUR:" | 2 |
| THX | "THX:" | 2 |
| Dolby Headphone Mode | "DHM:" | 2 |
| EQ MODE | "EQM:" | 3 |
| Night Mode | "NGT:" | 3 |
| RE-EQ | "REQ:" | 3 |
| Biligual | "BIL:" | 4 |
| M-DAX | "MDA:" | 3 |
| Lip Sync. | "LIP:" | 4 |
| Test Tone | "TTO:" | 1 |
| Digital Signal Format | "SIG:" | 4 |
| Sampling Frequency | "SFQ:" | 4 |
| Channel Status | "CHS:" | 4 |

| Status | | Layer |
|--|--------|-------|
| Tuner1 Frequency | "TFQ:" | 3 |
| Tuner1 Preset | "TPR:" | 2 |
| Tuner1 mode | "TMD:" | 2 |
| Tuner Preset Info. | "TPI:" | 2 |
| Tuner1 Multicast (HD Radio Only) <u>This command is available for SR8002 only.</u> | "TMC:" | 3 |

| Status | | Layer |
|--------------------|--------|-------|
| XM Category Search | "CAT:" | 1 |
| XM Channel Name | "CHN:" | 4 |
| XM Artist Name | "ARN:" | 4 |
| XM Song Title | "SON:" | 4 |
| XM Category Name | "CTN:" | 4 |

This part is available for SR8002 only.

HD Radio Only

| Status | | Layer |
|-----------------------------------|---------|-------|
| HD Station Name | "CHN1*" | 4 |
| HD TXT1(RDS Radio Text) | "ARN*" | 4 |
| HD TXT2(RDS Program Service Name) | "SON*" | 4 |
| HD PTY Name | "CTN*" | 4 |

| Status | | Layer |
|---------------------------------|--------|-------|
| Multi Room A POWER | "MPW:" | 1 |
| Multi Room A SPEAKER | "MSP:" | 2 |
| Multi Room A AUDIO MUTE | "MAM:" | 1 |
| Multi Room A VOLUME | "MVL:" | 1 |
| Multi Room A VOLUME SET | "MVS:" | 2 |
| Multi Room A SOURCE Select | "MSC:" | 1 |
| Multi Room A SLEEP | "MSL:" | 2 |
| Multi Room A OSD | "MOS:" | 2 |
| Multi Room A STEREO/MONO | "MST:" | 2 |
| Multi Room A Speaker VOLUME | "MSV:" | 1 |
| Multi Room A Speaker Volume Set | "MSS:" | 2 |
| Multi Room A Speaker A-MUTE | "MSM:" | 1 |

| Status | | Layer |
|--|--------|-------|
| Multi Room A Tuner1 Frequency | "MTF:" | 3 |
| Multi Room A Tuner1 Preset | "MTP:" | 2 |
| Multi Room A Tuner1 Mode | "MTM:" | 2 |
| Multi Room A Tuner1 Multicast (HD Radio Only) <u>This answer is available for SR8002 only.</u> | "MMC:" | 2 |

This part is available for SR8002 only.

| Status | | Layer |
|--------------------------------|--------|-------|
| Multi Room B POWER | "MPW=" | 1 |
| Multi Room B SPEAKER | "MSP=" | 2 |
| Multi Room B AUDIO MUTE | "MAM=" | 1 |
| Multi Room B VOLUME | "MVL=" | 1 |
| Multi Room B VOLUME SET | "MVS=" | 2 |
| Multi Room B SOURCE Select | "MSC=" | 1 |
| Multi Room B SLEEP | "MSL=" | 2 |
| Multi Room B OSD | "MOS=" | 2 |
| Multi Room B STEREO/MONO | "MST=" | 2 |
| Multi RoomB Speaker VOLUME | "MSV:" | 1 |
| Multi RoomB Speaker Volume Set | "MSS:" | 2 |
| Multi RoomB Speaker A-MUTE | "MSM:" | 1 |

This part is available for SR8002 only.

| Status | | Layer |
|--|---------------|----------|
| Multi Room B Tuner1 Frequency | "MTF=" | 3 |
| Multi Room B Tuner1 Preset | "MTP=" | 2 |
| Multi Room B Tuner1 Mode | "MTM=" | 2 |
| Multi Room B Tuner1 Multicast (HD Radio Only) | "MMC=" | 2 |

| Status | | Layer |
|--------------------------------|--------|-------|
| Auto status feedback | "AST:" | 1 |
| Read Host I/F Software version | "RSV:" | 1 |

6. Revision history

| Rev. | Date | Owner | Change description |
|------|------------|-----------------------|--------------------|
| 1.0 | 10/16/2007 | Marantz America, Inc. | First release |
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